



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,135	04/04/2005	Koichi Mikami	ASA-009	4663
38051	7590	10/17/2007		
KIRK HAHN 14431 HOLT AVE SANTA ANA, CA 92705			EXAMINER CHEN, SHIH CHAO	
			ART UNIT 2821	PAPER NUMBER
			MAIL DATE 10/17/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/530,135

Applicant(s)

MIKAMI ET AL.

Examiner

Shih-Chao Chen

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,8,9 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,6,8,9,11,12 and 14-16 is/are rejected.
- 7) ☒ Claim(s) 4 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

# **REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL** **(Submitted Only via EFS-Web)**

Application Number	10/530,135	Filing Date	2005-04-04	Docket Number (if applicable)	ASA-009	Art Unit	2821
First Named Inventor	Koichi Mikami			Examiner Name	Chen, Shih Chao		

**This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.**  
 Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

## **SUBMISSION REQUIRED UNDER 37 CFR 1.114**

**Note:** If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on \_\_\_\_\_

☐ Other \_\_\_\_\_

☒ Enclosed

☒ Amendment/Reply

☐ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other \_\_\_\_\_

## **MISCELLANEOUS**

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months \_\_\_\_\_  
 (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other \_\_\_\_\_

## **FEES**

**The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**

☐ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No \_\_\_\_\_

## **SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED**

☒ Patent Practitioner Signature

☐ Applicant Signature

**DETAILED ACTION**

***Request for Continued Examination***

1. The request filed on August 01, 2007 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 10/530,135 is acceptable and a RCE has been established. An action on the RCE follows.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 14 recites the limitation "the radiator of planar form" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sisson (U.S. Patent No. 3,568,206).

Regarding claim 1, Sisson et al. teaches in figures 1-3 a planar antenna fitted with a reflector [1] comprising: a radiator [7]; and a reflector of planar form [2] whereof both

Art Unit: 2821

side sections [4], arranged to the rear of and facing towards the radiator with only a prescribed separation (D), are bent towards the radiator (See Fig. 1-2), wherein  $\lambda$  is the wavelength of the central frequency of the operating frequency band, characterized in that the prescribed separation (D) (i.e. equal to the depth of the cavity 1, i.e. the length of probe 6) of the radiator and the reflector has a range from  $0.06 \lambda$  to  $0.15 \lambda$  (See col. 2, lines 38-41), and the separation [S] between the leading edges of two side sections in the reflector and the radiator is not greater than  $0.06 \lambda$  (i.e. D is approximately 0.05 wavelength and  $D > S$ ; See col. 1, lines 24-32).

Regarding claim 3, Sisson et al. teaches in figures 1-3 the planar antenna fitted with a reflector [1] of claim 1, characterized in that the radiator [7] is a loop.

Regarding claim 11, Sisson et al. teaches in figures 1-3 a planar antenna fitted with a reflector [1] comprising: a radiator [7]; and a reflector of planar form [2] whereof both side sections [4] of a rectangular metallic plate (i.e. having edges, surfaces, or faces that meet at right angles.) are bent substantially at right-angles towards the radiator, arranged to the rear of and facing towards the radiator with only a prescribed separation (D), are bent towards the radiator (See Fig. 1-2), wherein  $\lambda$  is the wavelength of the central frequency of the operating frequency band, characterized in that the prescribed separation (D) (i.e. equal to the depth of the cavity 1, i.e. the length of probe 6) of the radiator and the reflector has a range from  $0.06 \lambda$  to  $0.15 \lambda$  (See col. 2, lines 38-41), and the separation [S] between the leading edges of two side sections in the reflector and the radiator is not greater than  $0.06 \lambda$  (i.e. D is approximately 0.05 wavelength and  $D > S$ ; See col. 1, lines 24-32).

Art Unit: 2821

Regarding claim 12, Sisson et al. teaches in figures 1-3 the planar antenna fitted with a reflector [1] of claim 11, characterized in that the radiator [7] is a loop.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6, 8-9 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sisson et al. (Cited above) in view of Jeong-Kun et al. (U.S. Patent No. 6,606,067).

Sisson et al. teaches every feature of the claimed invention in paragraph 6 except for a double loop element wherein the width of the upper and lower sides is formed wider than that of the other sides.

Jeong-Kun et al. teaches in figures 4-5 a double loop element [40] wherein the width of the upper and lower sides is formed wider than that of the other sides.

Art Unit: 2821

In view of the above statement, it would have been obvious to one having ordinary skill in the art at the time the invention made by using a delta slot radiation element as taught by Jeong-Kun et al. in order to have low Q and it is possible to obtain a wide bandwidth (See col. 5, lines 16-22).

***Allowable Subject Matter***

9. Claims 4 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-Chao Chen whose telephone number is (571) 272-1819. The examiner can normally be reached on Monday-Thursday from 7 AM to 5:30 PM, Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2821

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shih-Chao Chen  
Primary Examiner  
Art Unit 2821

*Shih-Chao Chen*  
**SHIH-CHAO CHEN**  
**PRIMARY EXAMINER**

SXC  
October 7, 2007